

No.

200500234



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

*Syngenta Seeds, Inc.*

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC FURNISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE SAID APPLICANT(S) TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN, GARDEN

'Redon'

*In Testimony Whereof, I have hereunto set my hand  
and caused the seal of the Plant Variety  
Protection Office to be affixed at the City of  
Washington, D.C. this twelfth day of September,  
in the year two thousand and seven.*

Attest:

*Alm Z...*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*[Signature]*

Secretary of Agriculture

**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE**

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

<b>1. NAME OF OWNER</b>  Syngenta Seeds, Inc.		<b>2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME</b>  Redon	<b>3. VARIETY NAME</b>  Redon														
<b>4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)</b>  600 N. Armstrong Place Boise, ID 83704		<b>5. TELEPHONE (include area code)</b> (208) 322-7272  <b>6. FAX (include area code)</b> (208) 327-9319	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th align="center" colspan="2">FOR OFFICIAL USE ONLY</th> </tr> <tr> <td style="width:50%;"><b>PVPO NUMBER</b></td> <td style="width:50%;"><b>200500234</b></td> </tr> <tr> <td><b>FILING DATE</b></td> <td><b>April 26, 2005</b></td> </tr> <tr> <td><b>FILING AND EXAMINATION FEES:</b></td> <td><b>\$ 3652.00</b></td> </tr> <tr> <td><b>DATE</b></td> <td><b>4/07/2005</b></td> </tr> <tr> <td><b>CERTIFICATION FEE:</b></td> <td><b>\$ 768.00</b></td> </tr> <tr> <td><b>DATE</b></td> <td><b>7/17/07</b></td> </tr> </table>	FOR OFFICIAL USE ONLY		<b>PVPO NUMBER</b>	<b>200500234</b>	<b>FILING DATE</b>	<b>April 26, 2005</b>	<b>FILING AND EXAMINATION FEES:</b>	<b>\$ 3652.00</b>	<b>DATE</b>	<b>4/07/2005</b>	<b>CERTIFICATION FEE:</b>	<b>\$ 768.00</b>	<b>DATE</b>	<b>7/17/07</b>
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<b>DATE</b>	<b>7/17/07</b>																
<b>7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)</b>  Corporation	<b>8. IF INCORPORATED, GIVE STATE OF INCORPORATION</b>  DE	<b>9. DATE OF INCORPORATION</b>  February 25, 1975															
<b>10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)</b>  <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">           Charleen Orthel            Syngenta Seeds, Inc. - Vegetables            600 N. Armstrong Place            PO Box 4188            Boise, ID 83704         </div> <div style="width: 45%;">           Kim Briggs            6338 Highway 20-26            Nampa ID 83687         </div> </div>			<div style="writing-mode: vertical-rl; transform: rotate(180deg);">F E E S R E C E I V E D</div>														
<b>11. TELEPHONE (include area code)</b> (208) 327-7246 465-8522	<b>12. FAX (include area code)</b> (208) 327-9319 467-4559	<b>13. E-MAIL</b> Kim. briggs charleen.orthel@syngenta.com															
<b>14. CROP KIND (Common Name)</b>  Bean, Garden	<b>16. FAMILY NAME (Botanical)</b>  Fabaceae	<b>18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL)</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.															
<b>15. GENUS AND SPECIES NAME OF CROP</b>  Phaseolus vulgaris L.	<b>17. IS THE VARIETY A FIRST GENERATION HYBRID?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<b>20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)</b> <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23)															
<b>19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)</b> a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office) <b>Already received by PVP office</b>		<b>21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED															
<b>23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO  IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		<b>22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.  <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)															
<b>24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)?</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO  IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)																	
<b>25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.</b>  The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.  Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.																	
<b>SIGNATURE OF OWNER</b> 		<b>SIGNATURE OF OWNER</b> 															
<b>NAME (Please print or type)</b>  Charleen Orthel		<b>NAME (Please print or type)</b>  Kim Briggs															
<b>CAPACITY OR TITLE</b>  Registration Specialist	<b>DATE</b>  04/21/2005	<b>CAPACITY OR TITLE</b>  Registration Specialist	<b>DATE</b>  04/21/2005														

(See reverse for instructions and information collection burden statement)

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**Plant Variety Protection Office**

**Telephone: (301) 504-5518**

**FAX: (301) 504-5291**

**Homepage:** <http://www.ams.usda.gov/science/pvpo/pvpindex.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

## ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;  
(2) the details of subsequent stages of selection and multiplication;  
(3) evidence of uniformity and stability; and  
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:  
(1) identify these varieties and state all differences objectively;  
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and  
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

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**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

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**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

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- 1) April 27, 2001 France, Commercial Sale; 2) May 19, 2004, USA, Processor sample
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**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

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PBR EU, granted October 25, 2004: registration number: 2002/0506

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**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

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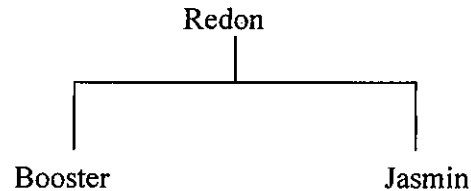
According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

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**Exhibit A**  
**Origin and Breeding History**  
**'Redon'**



The pedigree trace of 'Redon' is shown above. 'Redon' originated from the hand-pollinated cross between Booster, a variety from Vilmorin and Jasmin a variety developed by Syngenta Seed, Inc.'s European subsidiary company.

The pedigree selection method of breeding for the traits of long straight pods and a pod width of 5 to 6.5 mm was followed during F2, F3, F4, F5, F6, and F7. In the F8 generation 'Redon' was bulk harvested to supply a seed source for further increases. This produced dark, straight pods suitable for processing in Europe and North America. 'Redon' has been uniform and stable for six generations of increases from the original F8, being free of off-types and variants.

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**Exhibit B**  
**Statement of Distinctness**  
**'Redon'**

Redon is a bush snap bean suitable for processing markets that closely resembles the variety 'Masai'. 'Redon' differs statistically from 'Masai' in the following traits:

1. 'Masai' and 'Redon' were significantly different in two-sieve pod length in year 2004 and 2005. Average pod length for 'Redon' was 12.6 cm in 2004 and 2005 whereas, 'Masai' average pod length was 9 cm in 2004 and 2005. See attachment B-1 a, b, and c and B-3 a, b, and c.
2. Two-sieve pod width was significantly different in 2004 and 2005. 'Masai' had an average pod width of 5.7 mm in 2004 and 2005 and 'Redon' was 5.3 mm in 2004 and 2005. See attachment B-2 a, b, and c and B-4 a, b, and c.

All reported values for two-sieve pod length and two-sieve pod width are based on average measurements.

Data for each trait were collected from pods harvested from each variety of 100 plant plots in Nampa, Idaho. Random samples from two-sieve lots were measured for pod length and pod width.

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**Exhibit B**  
**Statement of Distinctness**  
**'Redon'**

Explanation of statistical analysis variables used in the following attachments

SV2PLMASID = Two-Sieve Pod Length (cm), Masai, Idaho 04

SV2PLREDID = Two-Sieve Pod Length (cm), Redon, Idaho 04

SV2PWMASID = Two-Sieve Pod Width (mm), Masai, Idaho 04

SV2PWREDID = Two-Sieve Pod Width (mm) Redon, Idaho 04

S2PLMID05 = Two-Sieve Pod Length (cm), Masai, Idaho 05

S2PLRID05 = Two-Sieve Pod Length (cm), Redon, Idaho 05

S2PWMID05 = Two-Sieve Pod Width (mm), Masai, Idaho 05

S2PWRID05 = Two-Sieve Pod Width (mm) Redon, Idaho 05

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**Descriptive Statistics**

Variable	N	Mean	SD	Minimum	Maximum
SV2PLMASID	20	9.0300	0.4612	8.1000	9.8000
SV2PLREDID	20	12.615	0.8475	11.100	14.000

Attachment B-1a  
Two-Sieve Pod Length (cm)  
Descriptive Statistics  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2004

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## One-Way AOV for: SV2PLMASID SV2PLREDID

Source	DF	SS	MS	F	P
Between	1	128.522	128.522	276	0.0000
Within	38	17.687	0.465		
Total	39	146.210			

Grand Mean 10.823 CV 6.30

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	6.47	1	0.0110
Cochran's Q	0.7715		
Largest Var / Smallest Var	3.3759		

Component of variance for between groups	6.40284
Effective cell size	20.0

Variable	Mean
SV2PLMASID	9.030
SV2PLREDID	12.615
Observations per Mean	20
Standard Error of a Mean	0.1526
Std Error (Diff of 2 Means)	0.2157

Attachment B-1b  
Two-Sieve Pod Length (cm)  
AOV  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2004



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**LSD All-Pairwise Comparisons Test**

Variable	Mean	Homogeneous Groups
SV2PLREDID	12.615	A
SV2PLMASID	9.0300	B

Alpha 0.05 Standard Error for Comparison 0.2157

Critical T Value 2.024 Critical Value for Comparison 0.4368

All 2 means are significantly different from one another.

Attachment B-1c  
Two-Sieve Pod Length (cm)  
Comparison of Means  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2004

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**Descriptive Statistics**

Variable	N	Mean	SD	Minimum	Maximum
SV2PWMASID	20	5.7500	0.5000	5.0000	6.5000
SV2PWREDID	20	5.3950	0.3120	4.8000	5.9000

Attachment B-2a  
Two-Sieve Pod Width (mm)  
Descriptive Statistics  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2004

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## One-Way AOV for: SV2PWMA SID SV2PWRE DID

Source	DF	SS	MS	F	P
Between	1	1.26025	1.26025	7.26	0.0105
Within	38	6.59950	0.17367		
Total	39	7.85975			

Grand Mean 5.5725 CV 7.48

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	3.97	1	0.0462
Cochran's Q	0.7198		
Largest Var / Smallest Var	2.5683		

Component of variance for between groups	0.05433
Effective cell size	20.0

Variable	Mean
SV2PWMA SID	5.7500
SV2PWRE DID	5.3950
Observations per Mean	20
Standard Error of a Mean	0.0932
Std Error (Diff of 2 Means)	0.1318

Attachment B-2b  
Two-Sieve Pod Width (mm)  
AOV  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2004

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**LSD All-Pairwise Comparisons Test**

Variable	Mean	Homogeneous Groups
SV2PWMASID	5.7500	A
SV2PWREDID	5.3950	B

Alpha	0.05	Standard Error for Comparison	0.1318
Critical T Value	2.024	Critical Value for Comparison	0.2668

All 2 means are significantly different from one another.

Attachment B-2c  
Two-Sieve Pod Width (mm)  
Comparison of Means  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2004

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**Descriptive Statistics**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Minimum</b>	<b>Maximum</b>
S2PLMID05	20	9.0240	0.4550	8.1000	9.8200
S2PLRID05	20	12.685	0.8139	11.100	13.700

Attachment B-3a  
Two-Sieve Pod Length (cm)  
Descriptive Statistics  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2005

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One-Way AOV for: S2PLMID05 S2PLRID05

Source	DF	SS	MS	F	P
Between	1	134.029	134.029	308	0.0000
Within	38	16.519	0.435		
Total	39	150.549			

Grand Mean 10.854 CV 6.07

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	5.94	1	0.0148
Cochran's Q	0.7619		
Largest Var / Smallest Var	3.1993		

Component of variance for between groups 6.67972  
Effective cell size 20.0

Variable	Mean
S2PLMID05	9.024
S2PLRID05	12.685
Observations per Mean	20
Standard Error of a Mean	0.1474
Std Error (Diff of 2 Means)	0.2085

Attachment B-3b  
Two-Sieve Pod Length (cm)  
AOV  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2005

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**LSD All-Pairwise Comparisons Test**

Variable	Mean	Homogeneous Groups
S2PLRID05	12.685	A
S2PLMID05	9.0240	B

Alpha	0.05	Standard Error for Comparison	0.2085
Critical T Value	2.024	Critical Value for Comparison	0.4221

All 2 means are significantly different from one another.

Attachment B-3c  
Two-Sieve Pod Length (cm)  
Comparison of Means  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2005

4

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**Descriptive Statistics**

Variable	N	Mean	SD	Minimum	Maximum
S2PWMID05	20	5.7700	0.3614	5.0000	6.2000
S2PWRID05	20	5.3200	0.3071	4.8000	5.9000

Attachment B-4a  
Two-Sieve Pod Width (mm)  
Descriptive Statistics  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2005



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One-Way AOV for: S2PWMID05 S2PWRID05

Source	DF	SS	MS	F	P
Between	1	2.02500	2.02500	18.0	0.0001
Within	38	4.27400	0.11247		
Total	39	6.29900			

Grand Mean 5.5450 CV 6.05

	Chi-Sq	DF	P
Bartlett's Test of Equal Variances	0.49	1	0.4844
Cochran's Q	0.5807		
Largest Var / Smallest Var	1.3850		

Component of variance for between groups	0.09563
Effective cell size	20.0

Variable	Mean
S2PWMID05	5.7700
S2PWRID05	5.3200
Observations per Mean	20
Standard Error of a Mean	0.0750
Std Error (Diff of 2 Means)	0.1061

Attachment B-4b  
Two-Sieve Pod Width (mm)  
AOV  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2005

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Statistix 8.0

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6/13/2007, 9:49:07 AM

LSD All-Pairwise Comparisons Test

Variable	Mean	Homogeneous Groups
S2PWMID05	5.7700	A
S2PWRID05	5.3200	B

Alpha	0.05	Standard Error for Comparison	0.1061
Critical T Value	2.024	Critical Value for Comparison	0.2147

All 2 means are significantly different from one another.

Attachment B-4c  
Two-Sieve Pod Width (mm)  
Comparison of Means  
'Masai' vs. 'Redon'  
Nampa, Idaho  
2005

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY  
Garden Bean (*Phaseolus vulgaris* L.)

NAME OF APPLICANT (S) <b>Syngenta Seeds, Inc.</b>	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME <b>REDON</b>
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) <b>600 N. Armstrong Place Boise, ID 83704</b>		FOR OFFICIAL USE ONLY PVPO NUMBER <b>200500234</b>

## PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g.,    or   ) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties centered in the same trial. Measured data should be for SPACED PLANTS. Ranges should also be given. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: Royal Horticultural Society  
Please answer all questions for your variety; lack of response may delay progress of your application.

## 1. TYPE:

1 = Garden      2 = Flageolet      3 = Romano

## 2. MARKET MATURITY:

Days to Edible Pods  
   **NOT MEASURED**  
Heat Units to Edible Pods

Number of Days Earlier Than

Same As

Number of Days Later Than

Comparison Variety

## Comparison Varieties

1 = Tender crop  
3 = Gold rush  
5 = Gitana  
7 = Bush Blue Lake 290

2 = Kentucky Wonder  
4 = Slenderette  
6 = Provider

8 = Other (Specify Below)

Masai

## 3. PLANT:

cm Spacing Between Plants in a Row

Habit

- 1 = Determinate  
2 = Indeterminate, Erect Stem and Branches  
3 = Indeterminate with Weak and Prostrate Stem and Branches  
4 = Indeterminate Climbing Habit with Weak, Long, and Twisted Stem and Branches

cm Height

cm Shorter Than

Same Height As

cm Taller Than

☒ ☐

Not Same as  
any  
Comparison Variety

Use Comparison Varieties from Section 2

## 3. PLANT: (continued)

200500234

32

cm Spread

06

cm Narrower Than

8

Same Width As

4

cm Wider Than

01

7

Comparison Variety

Use Comparison Varieties from Section 2

3

Pod Position 1 = Low 2 = High 3 = Scattered

4

Bush Form (Illustrated Below)



1 = Spherical Bush Form



2 = Stem Bush Form



3 = Wide Bush Form



4 = High Bush Form

5 = Other (Specify) \_\_\_\_\_

## 4. LEAVES:

1

Surface: 1 = Dull 2 = Glossy 3 = Indeterminate

2

Size: 1 = Small (Gitana) 2 = Medium 3 = Large (Tender Crop)

3

Color: 1 = Light Green (as Light or Lighter than Gold Rush)  
2 = Medium Green  
3 = Dark Green (as Dark or Darker than Bush Blue Lake 290)

## 5. ANTHOCYANIN PIGMENT:

1 = Absent

2 = Present

1

Flowers

1

Stems

1

Pods

1

Seeds

1

Leaves

1

Petioles

1

Peduncles

1

Nodes

## 6. FLOWER COLOR AND DAYS TO BLOOM:

1

Color of Standard

1

Color of Wings

1

Color of Keel

47

Days to 50% Bloom

Flower Color Choices

1 = White 2 = Cream

3 = Pink 4 = Lilac

5 = Purple 6 = Blue

7 = Other (Specify) \_\_\_\_\_

## 7. PODS (Edible Maturity):

2

Exterior Color  
(Fresh)

1 = Light Green (as Light or Lighter than Provider)

2 = Medium Green

3 = Dark Green (as Dark or Darker than Bush Blue Lake 290)

4 = Yellow (Gold Rush)

5 = Green-red Variegated (Horticultural)

6 = Other (Specify) \_\_\_\_\_

2

Processed Pods (Exterior Color)

1 = Light (Tender Crop)

2 = Dark (Bush Blue Lake 290)

1

Dry Pod Color

1 = Buckskin (Sprite)

2 = Green, Persistent Chlorophyll (Hystyle)

## 7. PODS (continued):

200500234

3 Cross Section Pod Shape: 1 = Flat 2 = Heart (Pear) 3 = Round 4 = Figure Eight

2 Crease Back 1 = Present 2 = Absent

3 Pubescence 1 = None (Slenderette) 2 = Sparse 3 = Considerable (Provider or Sprite)

1 Constriction (Interlocular Cavitation) 1 = None 2 = Slight 3 = Deep

8.4 mm Spur Length

2 Fiber 1 = None (Bush Blue Lake 290) 2 = Sparse 3 = Considerable (Sprite)

6 Number of Seeds per Pod

2 Suture String 1 = Present 2 = Absent

2 Seed Development 1 = Slow (Bush Blue Lake 290) 2 = Medium 3 = Fast (Provider)

1 Machine Harvest 1 = Adapted 2 = Not Adapted

Percent sieve size distribution at optimum maturity for not-flat pods

at 60 mm sd size

4.76 to 5.76mm	5.76 to 7.34mm	7.34 to 8.34mm	8.34 to 9.53mm	9.53 to 10.72 mm	>10.72mm
15 %	17 %	68 %	%	%	%

2 Sieve	13	cm Length	5.4	mm width	5.7	Total mm Thickness
3 Sieve	13	cm Length	5.7	mm width	6.0	Total mm Thickness
5 Sieve		cm Length		mm width		Total mm Thickness
6 Sieve		cm Length		mm width		Total mm Thickness

## 8. SEED COLOR:

3 Seed Coat Luster: 1 = Shiny 2 = Dull 3 = Semi-Shiny 4 = Variable

1 Seed Coat: 1 = Monochrome 2 = Polychrome

01 Primary Color: 1 = White 2 = Yellow 3 = Buff 4 = Tan 5 = Brown 6 = Pink 7 = Red 8 = Purple  
9 = Blue 10 = Black 11 = Other

-- Secondary Color: 1 = White 2 = Yellow 3 = Buff 4 = Tan 5 = Brown 6 = Pink 7 = Red 8 = Purple  
9 = Blue 10 = Black 11 = Other

1 Seed Coat Pattern 1 = Solid 1 = Splashed 3 = Mottled 4 = Striped 5 = Flecked 6 = Dotted

1 Hilar Ring 1 = Absent 2 = Present

+ Hilar Ring Color: 1 = White 2 = Yellow 3 = Buff 4 = Tan 5 = Brown 6 = Pink 7 = Red 8 = Purple  
9 = Blue 10 = Black 11 = Other

## 9. SEED SHAPE AND SIZE:

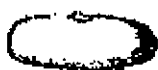
2 Hilum View

1 = Elliptical 2 = Oval 3 = Round

2 Cross Section 1 = Elliptical 2 = Oval 3 = Cordate 4 = Round

## 9. SEED SHAPE AND SIZE: (continued)

3 Side View



1 = Oval to Oblong



2 = Round



3 = Reniform

200500234

8.6

gm/100 Seeds

25

gm/100 Seeds Lighter Than

gm/100 Seeds Same As

-

gm/100 Seeds Heavier Than

☐
☒
☒

NONE

NONE

Comparison Variety

## 10. DISEASE RESISTANCE: 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

0

Anthracnose (*Colletotrichum lindemuthianum*)
☐

Race Alpha

☐

Race Beta

☐

Race Gamma

☐

Race Delta

☐

Race Epsilon

☐

Race Lambda

☐

Race Kappa

☐

Specify Race \_\_\_\_\_

0

Bean Rust (*Uromyces appendiculatus*)
☐

Race 38

☐

Race 39

☐

Race 40

☐

Race 44

☐

Race 45

☐

Race 46

☐

Race 49

☐

Race 50

☐

Race 51

☐

Race 52

☐

Race 54

☐

Race 56

☐

Race 59

☐

Specify Race \_\_\_\_\_

0

Powdery Mildew (*Erysiphe polygoni*)

0

Fusarium Root Rot (*Fusarium solani* f. sp. *phaseoli*)

0

Pythium Root Rot (*Pythium* spp.)

0

Aphanomyces Root Rot (*Aphanomyces euteiches*)

0

Rhizoctonia Root Rot (*Rhizoctonia solani*)

0

Pythium Blight or Aereal Pythium (*Pythium ultimum*)

0

Angular Leaf Spot (*Isariopsis griseola*)

0

Bacterial Wilt (*Corynebacterium flaccumfaciens* subsp. *flaccumfaciens*)

2

Bacterial Brown Spot (*Pseudomonas syringae* pv. *syringae*)

0

Common Bacterial Blight (*Xanthomonas campestris* pv. *phaseoli*)

0

Halo Blight (*Pseudomonas syringae* pv. *phaseolicola*)
☐

Race 1

☐

Race 2

0

Clover Yellow Vein Virus (CYVV)

0

Bean Common Mosaic Virus (BCMV)

☐

BV1

☐

NY15

☐

NL2

☐

NL3

☐

NL4

☐

NL8

☐

Florida

☐

Idaho

☐

Mexican

☐

Western

☐

Type

☐

Other (Specify)

Dominant I gene resistant to seed transmission

0

Yellow Bean Mosaic Virus (BYMV)

0

Curly Top Virus (BCTV)

0

Other (Specify Disease and Race or Strain)

21

11. INSECT RESISTANCE: 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

200500234

- |  |   |
|--|---|
| <input type="checkbox"/> Aphid                 | <input type="checkbox"/> Root Knot Nematode |
| <input type="checkbox"/> Leafhopper            | <input type="checkbox"/> Seed Corn Maggot   |
| <input type="checkbox"/> Lygus                 | <input type="checkbox"/> Thrips             |
| <input type="checkbox"/> Pod Borer             | <input type="checkbox"/> Weevils            |
| <input type="checkbox"/> Other (Specify) _____ |   |

12. PHYSIOLOGICAL RESISTANCE: 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant

- |  |                                |                                  |
|--|--------------------------------|----------------------------------|
| <input type="checkbox"/> Heat                  | <input type="checkbox"/> Cold  | <input type="checkbox"/> Drought |
| <input type="checkbox"/> Air Pollution         | <input type="checkbox"/> Ozone |                                  |
| <input type="checkbox"/> Other (Specify) _____ |                                |                                  |

13. COMMENTS:

22

**Exhibit E**  
**Statement of the Basis of Ownership**  
**'Redon'**

Garden Bean Redon was bred and developed by plant breeders employed by Syngenta Seeds. By agreement between the employee and Syngenta Seeds, all rights to any invention, discovery or development made by the employee while employed by Syngenta Seeds were assigned to Syngenta Seeds, with no rights retained by the employee.



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E  
STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S)  Syngenta Seeds, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME  Redon
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)  600 North Armstrong Place Boise, ID 83704	5. TELEPHONE (Include area code)  208-465-8522	6. FAX (Include area code)  208-467-4559
7. PVPO NUMBER  200500234		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

Garden Bean, Redon, was bred and developed by plant breeders employed by Syngenta Seeds. By agreement between the employee and Syngenta Seeds, all rights to any invention, discovery or development made by the employee while employed by Syngenta Seeds were assigned to Syngenta Seeds, with no rights retained by the employee

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**EXHIBIT F  
DECLARATION REGARDING DEPOSIT**

NAME OF OWNER (S)  Syngenta Seeds, Inc.	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)  600 North Armstrong Place Boise, ID 83704  USA	TEMPORARY OR EXPERIMENTAL DESIGNATION   VARIETY NAME Redon
NAME OF OWNER REPRESENTATIVE (S)  Kim Briggs	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)  6338 Highway 20-26 Nampa, ID 83687	FOR OFFICIAL USE ONLY  PVPO NUMBER

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Signature



Date

02-14-2007